

REMARKS

In the pending office action, the Examiner maintained the previous §102(e) rejection of claims 102, 109, 111 – 115, 117, 118, and 120 – 125 by maintaining that Gilhousen (U.S. Patent No. 5,101,501) anticipates the claimed invention. Applicant strongly disagrees with this assessment and provides the following remarks to distinguish the claimed invention from Gilhousen.

The Examiner's §102 rejection is legally flawed. As discussed further below, Gilhousen describes a network controller that implements hand-off in one of two ways. In a first distinct embodiment, Gilhousen teaches a system controller that directs mobile station hand-off based on signal strength information collected from neighboring cell-sites. The collected signal strength information indicates how well neighboring cell-sites receive the mobile station's reverse link signals. In a second distinct embodiment, Gilhousen teaches a system controller that implements mobile station hand-off according to instructions provided by the mobile station. In particular, the mobile station measures the signal strength of pilot signals from neighboring cell-sites and directs the system controller to hand-off control of the mobile station of a cell-site selected by the mobile station. The Examiner's §102 rejection is legally flawed because the Examiner interprets Gilhousen in a manner plainly contradicted by the teachings of Gilhousen.

As summarized above, Gilhousen clearly describes a network controller that implements hand-off of a mobile station from one cell-site to another cell-site according to one of two embodiments. In the first embodiment, the network makes the hand-off decisions. Specifically, a system (network) controller within the network polls the neighboring cell-sites and determines which cell-site receives the strongest signal from the mobile station. Based on this determination, the system controller initiates the hand-off of the mobile station. See column 3, lines 34 – 44. Clearly, the system controller in this embodiment initiates hand-off based on information provided by neighboring cell-sites, and therefore, operates independently of the mobile station.

In the second embodiment, Gilhousen describes mobile station directed hand-off.

Specifically, the mobile station monitors pilot signals transmitted from neighboring cell sites.

When the mobile station determines that a neighboring cell-site pilot signal is stronger than the pilot signal of the current cell, the mobile station determines that hand-off should be initiated. In response to this determination, the mobile station

generates and transmits a control message to the cell-site presently servicing the call. This control message, indicative that a new cell-site transmitted pilot signals is now stronger than the current cell-site transmitted pilot signal is now stronger than the current cell-site transmitted pilot signal, is provided to the system controller. The control message further contains information identifying the new cell-site and PN code.

(Gilhousen at column 4, lines 44 – 50). In other words, the Gilhousen's system controller interprets the control message transmitted by the mobile station as a direction from the mobile station to hand-off control from the current cell-site to a cell-site specified by the mobile-station. See column 4, lines 27 – 53. This embodiment of Gilhousen is properly understood as "mobile-directed" or "mobile-initiated" hand-off, wherein the mobile station selects the target cell-site for hand-off and/or instructs the system controller to implement hand-off.

Contrastingly, the present invention as claimed in claim 102 describes mobile-assisted hand-off. In particular, claim 102 claims (emphasis added):

102. A method of mobile-assisted handover in a wireless network comprising:
communicating with a mobile station from a first base station;
receiving, at a network controller, one or more data messages sent from said
mobile station to said first base station that indicate relative signal
strengths of at least a second base station operating on a same
frequency as said first base station;
determining, by said network controller, to handover said mobile station from
said first base station to said second base station based on said
signal strengths; and
handing over said mobile station from said first base station to said second
base station based on said determination by said network controller.

As clearly claimed by claim 102, the mobile station measures the strength of signals from at least one neighboring cell-site, and provides the measured signal strengths to the network/system controller. The network controller then evaluates the data provided by the

mobile station to determine if a hand-off should occur. In other words, the network controller of the present invention initiates hand-off based on pilot signal strength data provided by the mobile station.

Nothing in Gilhousen teaches the mobile-assisted hand-off claimed in the present invention. The Examiner continues to assert that column 3, lines 29 – 44 and column 4, line 27 through column 5, line 11 anticipate the limitations of claim 102. However, with all due respect, the sections cited by the Examiner plainly affirm Applicants' position. Column 3, lines 29 – 44 simply states that the network may initiate hand-off based on data collected by the network controller from multiple cell-sites (lines 34 – 44) or that the mobile station may initiate/direct hand-off (lines 29 – 34). Nothing in the cited section indicates that the network initiates and controls hand-off based on signal strength data collected by the mobile station and provided by the mobile station to the network. Instead, this section explicitly teaches that the network initiates hand-off based on signal strength data collected by Gilhousen's system controller from neighboring cell-sites. Note that, in contrast to Applicant's claimed use of forward link pilot signal strength reports from the mobile station, Gilhousen relies on reverse link signal strengths reported from the cell-sites.

Column 4, line 27 through column 5, line 11 describes how the Gilhousen mobile station may initiate or direct the hand-off. However, contrary to the Examiner's assertions, this section clearly teaches that the mobile station evaluates the pilot signal strengths received from neighboring cell-sites and, based on that evaluation, the mobile station directs the network/system controller to begin hand-off. The mobile station never actually provides the measured signal strengths to the network.

For at least the above-stated reasons, Gilhousen does not anticipate independent claim 102. Should the Examiner insist on maintaining the rejection, Applicants request that the Examiner quote the specific sections in Gilhousen that explicitly teach both of the following:

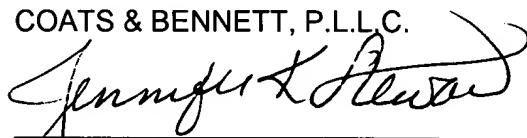
- providing signal strength data from a mobile station to a network controller; and

- initiating hand-off at the network controller based on the received signal strength data.

Because independent claim 102 is patentably distinct from Gilhousen, dependent claims 109 – 125 are also patentably distinct from the cited art. Therefore, Applicants respectfully request reconsideration and allowance of the claims. Should any issues remain unresolved, Applicants ask that the Examiner call the undersigned to expeditiously resolve such issues.

Respectfully submitted,

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Dated: 30 June 2005